

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A method for setting the grid voltage of a tandem pin charging device, the method comprising:
 - determining a charge-generating emitter ratio of a first charging unit;
 - setting a first grid voltage based on the charge-generating emitter ratio of the first charging unit;
 - determining a charge-generating emitter ratio of a second charging unit;
 - setting a second grid voltage based on the determined charge-generating emitter ratio of the second charging unit; and
 - comparing a final voltage of a photoreceptor with a final target voltage.
2. (Original) The method of claim 1, wherein determining the charge-generating emitter ratio of the first charging unit comprises:
 - determining a target voltage of a first charging unit grid;
 - determining a target voltage of a second charging unit grid;
 - measuring at least one environmental parameter;
 - setting a voltage of the first charging unit grid to an amount below the target voltage of the first charging unit grid;
 - setting the second charging unit grid to a minimum amount;
 - sensing a first photoreceptor voltage;
 - setting the first charging unit to an amount above the target voltage of the first charging unit;
 - setting the second charging unit grid to the minimum amount; and
 - sensing a second photoreceptor voltage.
3. (Original) The method of claim 2, further comprising charging the first charging unit grid and the second charging unit grid by a pin scorotron device.
4. (Original) The method of claim 2, further comprising charging the first charging unit grid and the second charging unit grid by a pin corotron device.
5. (Original) The method of claim 2, further comprising determining the target voltage of the first charging to be about five hundred volts.

6. (Original) The method of claim 1, wherein determining the charge-generating emitter ratio of the second charging unit comprises:

setting the first charging unit voltage to a setback target voltage;

setting the second charging unit voltage to a first amount below the final target voltage;

sensing a third photoreceptor voltage;

setting the second charging unit voltage to a second amount below the final target voltage;

sensing a forth photoreceptor voltage.

7. (Original) The method of claim 1, further comprising adjusting the second charging unit voltage to one of a higher voltage and a lower voltage when the final voltage of the photoreceptor is not within a predetermined range of the target voltage.

8. (Original) The method of claim 7, further comprising counting a number of voltage adjustments with a loop counter and indicating a fault when the number of voltage adjustments reaches a predetermined amount.

9. (Original) The method of claim 7, further comprising making no adjustment to the second charging unit voltage when the final voltage is within the predetermined range of the target voltage.

10. (Original) The method of claim 7, further comprising adjusting the offset voltage in increments of about five volts.

11. (Original) The method of claim 7, further comprising determining that the predetermined range is one of about ten volts above the target voltage and about ten volts below the target voltage.

12. (Original) The method of claim 8, further comprising indicating a fault when the loop counter counts ten voltage adjustments.

13. (Original) The method of claim 1, further comprising determining the final target voltage to be about six hundred and fifty volts.

14. (Original) The method of claim 1, further comprising measuring the final voltage of the photoreceptor with an electrostatic volt meter.

15. (Original) A charging system control system that controls the grid voltage set-up process of a tandem pin charging device, comprising:

a first charging unit target voltage determining circuit, routine or application that determines the target voltage for a first charging unit;

a second charging unit target voltage determining circuit, routine or application that determines the target voltage of a second charging unit;

a charge-generating emitter ratio determining circuit, routine or application that determines the charge-generating emitter ratio of at least one of the first charging unit and the second charging unit; and

a final voltage comparing circuit, routine or application that compares a final voltage applied to a photoreceptor with a final target voltage.

16. (Original) The charging system control system of claim 15, further comprising an input/output interface for inputting data from at least one of an electronic volt meter and an environmental data source to at least one of a memory, a first charging unit target voltage determining circuit, routine or application, a second charging unit target voltage determining circuit, routine or application, a charge generating emitter determining circuit, routine or application and a final voltage comparing circuit routine or application.

17. (Original) The charging system control system of claim 15, further comprising a controller for controlling at least one of the first charging unit voltage setting device and the second charging unit voltage setting device.

18. (Original) The charging system control system of claim 17, wherein the input/output interface outputs commands from the controller to at least one of a first charging unit voltage setting device and a second charging unit voltage setting device.

19. (Original) The charging system control system of claim 15, further comprising a memory for storing data from at least one of the electronic volt meter and the environmental data source.

20. (Currently Amended) The charging system control system of ~~claim 18~~
claim 19, wherein the memory is a nonvolatile memory.